APEX STANDARDS
ETSI TS/TR & STANDARD ESSENTIALITY SEARCH

APEX STANDARDS TS/TR & Standard Essentiality Search enables rapid scanning and searching throughout tens of thousands of ETSI Technical Specification and Technical Report PDF files.

The Search Engine takes keywords and filters, e.g., Specifications, Versions, Releases, Sections or a Date Range as input, exhaustively scans and outputs **(TS/TR, Version, Section, Page Number)** combinations that satisfy the search criteria and meet the standard essentiality declaration requirement to provide **"Illustrative Specific Part of the Standard (e.g. Section)"**. This allows to answer critical, high stake questions including:

Precise Declaration

As a **Standardization Researcher** or an **IPR professional**, how do I know if a patent is standard essential and if yes, to which standard(s)?

To determine, one takes feature keywords from this patent's claim elements, and search against the PDF files published by ETSI (European Telecommunications Standards Institute) based on the specifications developed and consensus agreed in each WG (Working Group), and finally, approved and frozen by the corresponding TSG (Technical Specification Group). This poses several challenges, such as synonym discovery, e.g., ... for controlling a beam pattern of the wireless interface ... for receiving a locking signal indicating a request for locking at least a part of the beam pattern ... in a patent claim may map to Section 5.4.2.1 ... The SS requests the UE to activate beamlock by transmitting an ACTIVATE BEAMLOCK message ... in 3GPP TS 38.214 V16.0.0, hence indicating essentiality of the patent to that standard. The mapping further communicates value of such patent, for example, for monetization, for out-licensing discussions with implementers, for joining a patent pool or for corporate financing before lenders or investors.

Establishing *standard essentiality requires time-intensive processes involving weeks of cross-domain discussions without guaranteed success. APEX is designed to overcome this challenge by supporting claim charting with precise TS–Version–Section matching, especially when patent-to-TS disclosures are vague or approximate. In practice, many of our clients have found it valuable for identifying alternative TS options when initial TS or assumptions fail to generate a workable claim chart.*

Validation

As a **portfolio manager** required to prepare patent landscaping, how do I know if my patents have been properly and accurately declared? More importantly, how do I know, whether competitors have made superfluous, unwarranted declarations?

To protect the company's technological and financial interests, portfolio managers work with licensing officers to ensure that a fair representation of patents have been identified and verified as essential, which then go into the negotiation between patent holders and implementers under (Fair) Reasonable and Non-Discriminatory, or F/RAND licensing terms. Can this be done more automatically and convincingly?

TS/TR STANDARD ESSENTIALITY SEARCH MADE BETTER & FASTER

Maturity

As an **implementer**, is it possible to know how mature a feature is - is it in an early stage, is it trendy, is it well developed, or, has it become outdated?

To find out, ones takes keywords or variations of keywords and search the PDF files. This way, a professional can determine if it is a subtle and valuable new feature, or something that has been established and extensively documented in older versions or releases of specifications.

Continuity

As a **licensee** negotiating royalties over different product life cycles, how do I know when an essential feature becomes part of a standard, or has such feature been amended halfway, or removed at a certain point in time? Does the patent keep the same degree of essentiality in the newest version?

Features may be taken out from the same TS. A procedure may be amended due to errors or inefficiency. When a feature enters or departs from a standard in a particular version, patents having that feature may, accordingly, become more or less essential to that standard in that version. APEX helps determine essentiality across time periods.

Version Control

As a **telecom operator** or an **user device manufacturer**, how do I know on a broader scale what features are transferred in whole or in part from 4G to 5G or from 5G to 5G+?

Real world analyses call for systematic separation of new and old features. If a feature has been completely transferred, is it a verbatim copy or is it substantially rephrased? If a feature is partially adopted, how and where does it differ in the next generation from that of an older generation? For how long has it been adopted in certain standards and across versions? When did it start? When did it end? Is it still current? How much confidence do I have for a feature to be carried forward to the next version or generation? Without answers, it is hard to measure the Return on Investment (ROI) for developing or acquiring a new feature.

Having Full Knowledge, One Will Be Truly Able to Communicate Value, Risk, and the ROI.

Invention Disclosure

As an **inventor**, a **patent attorney**, or a **potential licensor**, when filling out the Information Disclosure Statement (IDS) for a new patent application, how do I select the best TS and Version combinations for a new patent application?

Duty of Candor must be fulfilled and the novelty of the invention must be compared and justified. APEX allows applicants to efficiently search and provide structured, technical details for the IDS and in the Background of the Invention, its Relevance and Technical Descriptions.

Completeness

As a **R&D Manager** or a **Licensing Officer**, how do I analyze relations amongst different TS and Versions?

A patent may be essential to multiple standards. The broader the relevance of a patent with different standards (super SEP), the harder it is to design around in such a way that it indicates a high value. If complex patent-TS and TS-TS relationships can be systematically compared and linked, critical R&D and IPR decision making will generate higher rate of success now and in the long run.

No Regret Over Missed Opportunities

For decades, stakeholders used to operate based on personal experience, intuition and networking. With Apex Standards, it is now possible for these critical decisions to be backed by data driven, evidence based and fact checked analysis that will deliver truly informed strategies.

Isn't It Nice to Have Both the Soft Power and the Hard Power?
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Project	TSG	WG	Release	Release Date	TS/TR	Version	Spec Title	Section	Page Number	View PDF
5G / Rel-15 / R4 / TS 38.101-2 Ver 15.10.0										
5G	RAN	R4	Rel-15	2020-07-23	TS 38.101-2	15.10.0	TS 138 101-2 - V15.10.0 - 5G; NR; User Equipment (UE) radio transmission and reception; Part 2: Range 2 Standalone (3GPP TS 38.101-2 version 15.10.0 Release 15)	6.2.1.1 UE maximum output power for power class 1	34	view
5G	RAN	R4	Rel-15	2020-07-23	TS 38.101-2	15.10.0	TS 138 101-2 - V15.10.0 - 5G; NR; User Equipment (UE) radio transmission and reception; Part 2: Range 2 Standalone (3GPP TS 38.101-2 version 15.10.0 Release 15)	6.2.1.2 UE maximum output power for power class 2	35	view
5G	RAN	R4	Rel-15	2020-07-23	TS 38.101-2	15.10.0	TS 138 101-2 - V15.10.0 - 5G; NR; User Equipment (UE) radio transmission and reception; Part 2: Range 2 Standalone (3GPP TS 38.101-2 version 15.10.0 Release 15)	6.2.1.3 UE maximum output power for power class 3	36	view